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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,713	08/25/2003	Jonathan Stamler	102258.121 US3	9858

7590

12/21/2005

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EXAMINER
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GHALI, ISIS A D

ART UNIT	PAPER NUMBER
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1615

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,713

Applicant(s)

STAMLER ET AL.

Examiner

Isis Ghali

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,5-8,12-15,19-22,26-29 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-8,12-15,19-22,26-29 and 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

The receipt is acknowledged of applicants' amendment filed 09/20/2005.

Claims 2-4, 9-11, 16-18, 23-25, 30-32 have been canceled. Claims 1, 5-8, 12-15, 19-22, 26-29, and 33-35 are pending and included in the prosecution.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 5-8, 12-15, 19-22, 26-29, and 33-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification lacks description for ACE inhibitor which has at least one  $-O-NO_2$  group. With careful recourse to the specification, the examiner notices that at pages 17-21 applicants disclosed ACE inhibitors, however, none of the disclosed ACE inhibitors has  $-O-NO_2$  group. The disclosed ACE inhibitors on pages 17-21 all have NO (nitroso-group). On the other hand, on page 23 applicants disclose NO (nitric oxide) adducts that

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have –O-NO<sub>2</sub> group and they do not include any ACE inhibitors. Clarification is requested.

3. Claims 1, 5-8, 12-15, 19-22, 26-29, and 33-35 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for local delivery of nitric NO adduct at the site of contact of a device or instrument containing NO with the blood, does not reasonably provide enablement for all routes of administration of NO. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are: the nature of the invention; the breadth of the claims; the state of the prior art; the relative skill of those in the art; the amount of direction or guidance presented; the predictability or unpredictability of the art; the presence or absence of working examples; and the quantity of experimentation necessary. When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation.

**The nature of the invention:** The nature of the invention is method for inhibiting platelets aggregation by administering NO adduct locally to device or instrument intended to contact the blood, such as catheter or stent. The entire specification

disclosed local delivery of NO from devices or instruments contacting the blood, page 14 and 15. Nowhere in the specification applicants disclosed other methods for administering NO.

**The breadth of the claims:** The claims are very broad. The claims encompass all method of administration of NO including intravenous, infusion, transdermal, implant, or oral, etc.

**The state of the prior art:** The state of the art recognized the inhibitory effects of NO on platelets aggregation. However, the art does not recognized NO adduct containing nitrate group coated on medical devices and instrument.

**The relative skill of those in the art:** The relative skill of those in the art is high.

**The amount of direction or guidance presented:** The specification provides no guidance, in the way written description, on the administration of NO by routes other than inclusion in devices and instruments that contact the blood. It is not obvious from the disclosure of delivery of NO by inclusion in devices and instruments that contact the blood if the other methods of administration will provide the same platelets aggregation inhibitory effect. It must appear in an applicant's specification either by the enumeration of a sufficient number of administration methods or by other appropriate language, that other methods of administration encompassed by the claims are capable of accomplishing the desired result. A disclosure should contain representative examples which provide reasonable assurance to one skilled in the art that the administration methods fall within the scope of a claim will possess the alleged activity.

**The predictability or unpredictability of the art:** The lack of guidance from the specification and from the prior art with regard to inhibiting platelets aggregation using NO by all routes of administration makes practicing the claimed invention unpredictable in the terms of the method of administration of NO.

**The presence or absence of working examples:** The specification discloses only NO included in devices or instruments contact patient's blood. Therefore, the specification has enabled local administration of NO by inclusion in devices and instruments contacting blood as shown by the examples.

**The quantity of experimentation necessary:** Therefor, the practitioner would turn to trial and error experimentation to practice the instant method for inhibiting platelets aggregation by all other known methods of administering drugs without guidance from the specification or the prior art. Therefore, undue experimentation becomes the burden of the practitioner.

**If applicants canceled that ACE inhibitor has at lease –O-NO<sub>2</sub> group, then the prior art cited in the previous office action are applicable.**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isis Ghali whose telephone number is (571) 272-0595. The examiner can normally be reached on Monday-Thursday, 7:00 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isis Ghali  
Examiner  
Art Unit 1615

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**ISIS GHALI**  
**PATENT EXAMINER**